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Walter Kogel

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EXAMINER

ARCE, MARLON ALEXANDER

ART UNIT

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3611

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.



## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments, see remarks, filed 5/4/10, with respect to the rejection of claims 10,12,14,16 and 17 in view of Okamoto and Bohner have been fully considered and are persuasive. The rejection of the above-cited claims has been withdrawn.
2. Applicant's arguments filed 5/4/10 have been fully considered but they are not persuasive. Regarding applicant arguments about Bohner; Examiner believes that the applicant claims are not specific to a system that has to be operational continuously at all times; however, applicant's claim 10 states that "the rack and piston act in parallel with one another to jointly adjust the steering angle of the wheel"; Bohner shows a rack (3) that is also the piston within the cylinder (4), said rack moves due to the actuation of the servo motor (12); wherein the motion of the rack would also move the piston rod (3') within the servo cylinder (4') due to the mechanical connection through the link connecting the rack (3) and the piston rod (3') {{see figure 1}}; hence the movement of either the rack would also actuate the piston rod and vice-versa and, said movement would allow the rack and piston rod to act in parallel with one another on an additional member {{link connecting the rack and piston rod seen in figure 1}} to jointly adjust the steering angle of the wheel. Examiner also likes to point out that it can be said that the rack and piston move simultaneously even though the systems do not work at the same time due to the connection between the rack and the piston rod.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 10-14 and 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Bohner (US 6612393). Bohner discloses a n electro-hydraulic steering system for motor vehicles comprising: a servo cylinder (4') with a piston rod (3'), a servo valve (7,7') with internal parts that actuates the piston rod to change the steering angle of a wheel (1); Bohner further has a rack connected to pinion (19), an electric motor (12,12') adapted to drive the rack and the piston rod {{the rack and piston rod are mechanically connected, see figure 1}} to adjust the angle of the wheel (1); a steering shaft (21) adapted to turn in order to allow a set of rotational sensors (25,26) to send a signal to a control part (29,29'), wherein the control part controls the servo valve; a drive output member (4) that drive the rack (3) from side to side due to the actuation generated by the servo valve; wherein, the rack and the piston rod are adapted to act in a parallel arrangement (fig. 1) with on another on an addition member (link connecting the rack and piston rod, see figure 1) to jointly adjust the angle of the wheel (1). Regarding claim 13 and 14, the rack and the piston rod are pivotally or articulately connected to the addition member. Regarding claim 4; a person of ordinary skill in the art would know that electric motors

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driving a pump or a hydraulic valve need to have a gear, worm gear or a geared shaft that makes the transfer of rotational force generated by the motor to the pump or internal parts of valve possible. in the instant case the electric motor (12) seems to have a geared shaft that drives a pump (10), the pump transmits fluid to the internal parts of the servo valve (7), and the internal parts of the valve are connected to the drive output member (4). Regarding claim 18, there is two electric motors (12,12') acting on the rack or control part due to the mechanical connections between the servo cylinder (4') and the rack.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bohner (US 6612393). Bohner fails to show that the electric motors are able to transmit different rotational power. However; it would be obvious for someone skilled in the art to know that each the electric motor being controlled by two different control parts (29) would have a slight difference in rotational power in order to compensate one another, and in order to cooperate with each other.

***Allowable Subject Matter***

7. Claim 15 is allowed.

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8. Claims 16 and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARLON A. ARCE whose telephone number is (571)272-1341. The examiner can normally be reached on Mon-Fri 8:00 am to 4:30 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lesley Morris can be reached on (571) 272-6651. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Marlon A. Arce/

7/7/10

MAA

/LESLEY D MORRIS/  
Supervisory Patent Examiner, Art Unit 3611